

DERWENT-ACC-NO: 2002-063896

DERWENT-WEEK: 200209

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TITLE: Environmentally friendly precoated steel  
sheets having corrosion resistance in the processed part

PATENT-ASSIGNEE: NKK CORP [NIKN]

PRIORITY-DATA: 1999JP-0372209 (December 28, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES MAIN-IPC		
<u>JP 2001179175 A</u>	July 3, 2001	N/A
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APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP2001179175A	N/A	1999JP-0372209
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INT-CL (IPC): B05D007/14, C23C022/00 , C23C022/07 , C23C022/40

ABSTRACTED-PUB-NO: JP2001179175A

BASIC-ABSTRACT:

NOVELTY - Environmentally friendly precoated steel sheet having corrosion resistance in the processed part consists of a zinc galvanized steel sheet on which a chemical conversion coating containing silica fine particles and a binder is formed, an undercoat formed on the chemical conversion coating and containing 5-100 weight parts of a rust preventive which releases phosphate ions in the presence of water and 5-100 weight parts of a rust preventive which releases vanadate ions in the presence of water with the total amount of the both rust preventives being 100-120 weight parts for every 100 weight parts of

a solid resin, and a finish coat formed on the undercoat, and the finish coat is formed through the application of a coating composition containing specific compounds as resin constituents.

DETAILED DESCRIPTION - Environmentally friendly precoated steel sheet having corrosion resistance in the processed part consists of a zinc galvanized steel sheet on which a chemical conversion coating containing silica fine particles and a binder is formed, an undercoat formed on the chemical conversion coating and containing 5-100 weight parts of a rust preventive which releases phosphate ions in the presence of water and 5-100 weight parts of a rust preventive which releases vanadate ions in the presence of water with the total amount of the both rust preventives being 100-120 weight parts for every 100 weight parts of a solid resin, and a finish coat formed on the undercoat, and the finish coat is formed through the application of a coating composition containing, as resin constituents, (a) a polyester compound containing a repeating unit of formula (1-1) at 1-15 weight percent with respect to the solid resin, (b) a polyol except the polyester compound (a) at 40-90 weight percent with respect to the solid resin, and (c) a curing agent at 9-50 weight percent with respect to the solid resin. Formula (1-1)-p

n = integer of 2-10;

R = polyoxymethylene group, 1,4-cyclohexylene dimethyl group, neopentylene group, or  $-(CH_2)_m$  (m = 1-10);

R' = naphthylene or phenylene.

USE - The precoated steel sheets can be used as household appliance, building, and automotive materials.

ADVANTAGE - The precoated steel sheets are environmentally friendly and have

high corrosion resistance in the processed part, hardness, good processability, and good appearance of the coat film.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: ENVIRONMENT FRIEND PRECOAT STEEL SHEET CORROSION RESISTANCE

PROCESS PART

DERWENT-CLASS: A14 A82 G02 M14 P42

CPI-CODES: A05-E01D1; A12-B04C; G02-A02E; G02-A05E; M14-K;

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